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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/405,716 | 09/24/1999 | HAIMING WANG | TNCR.170US1 | 9795 |

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PARSONS HSUE & DE RUNTZ LLP
655 MONTGOMERY STREET
SUITE 1800
SAN FRANCISCO, CA 94111

EXAMINER

SMITH, ZANDRA V

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/405,716

Applicant(s)

WANG ET AL.

Examiner

Zandra V. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 and 67-143 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-65, 67-129 and 136-139 is/are allowed.
- 6) ☒ Claim(s) 130, 131, 133-135, 140, 141 and 143 is/are rejected.
- 7) ☐ Claim(s) 132 and 142 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 130-131, 133-135, 140-141, and 143 are rejected under 35 U.S.C. 102(b) as being anticipated by *Knollenberg (4,893,932)*.

As to **claims 130-131, 133-134, 140-141** Knollenberg discloses a surface analysis system, comprising:

- a source(14, 16) providing a beam of radiation;
- optics (lens) comprising a cylindrical objection for projecting a spot onto the sample and having a focusing power in the plane of incidence (28, 48);
- a detector (72, 66);
- a modulating device (64); and
- a system deriving reflectance data from the detected radiation (76, col. 6, line 36-col. 7, line 45).

As to **claims 135 and 143**, Knollenberg discloses everything claimed, as applied above, in addition the light is focused to a spot on the surface (col. 6, lines 56-58).

Allowable Subject Matter

Claims 1-65, 67-129, and 136-139 are allowable over the prior art of record.

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The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken alone or in combination, fails to disclose or render obvious a sample measurement system that derives one or more parameters of a system and one or more ellipsometric parameters of a sample using the same measurement, in combination with the rest of the limitations of the claims 1, 90, and 107.

Regarding claims 17, 29, and 59, the prior art of record, taken alone or in combination, fails to disclose or render obvious a sample measurement system that includes the combination of a fixed or rotating polarizing element, prior to the sample, a second rotating polarizing element and a fixed linear polarizer after the sample, in combination with the rest of the limitations of the claims.

As to claims 37 and 70, the prior art of record, taken alone or in combination, fails to disclose or render obvious a sample measurement system that includes the provision of linearly polarized light to a sample and a rotating phase modulator and a rotating polarizer to derive ellipsometric parameters of the sample and parameters of the source, optics or modulator, in combination with the rest of the limitations of claims.

As to claim 80, the prior art of record, taken alone or in combination, fails to disclose or render obvious, a sample measurement system that includes the use of a cylindrical objective lens and determining one or more ellipsometric parameters in response to detected radiation, in combination with the rest of the limitations of the claim.

Regarding claims 97, 103, 114, 119, and 123-125, the prior art of record, taken alone or in combination, fails to disclose or render obvious a system that determines film thickness and depolarization of a sample, in combination with the rest of the limitations of the claims.

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Response to Arguments

As to claims 37 and 70, the prior art of record, taken alone or in combination, fails to Applicant's arguments filed 25 April 2003 have been fully considered but they are not persuasive.

Applicant's representative argues that Knollenberg is a system for determining internal and external particle contamination and not surface features such as index of refraction or thickness, however those limitations are presented in claims 130 and 140. Claims 130-140 only require a beam of radiation, a cylindrical lens, detector, modulating device and determination of one or more characteristics of the sample. Claims 130 and 140 do not require the determination of the index of refraction and/or thickness of the surface.

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (703) 305-7776. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

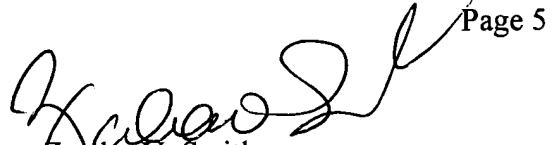
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703)308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0530.

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Zandra V. Smith
Primary Examiner
Art Unit 2877

July 14, 2003